

**REMARKS**

**FINALITY OF OFFICE ACTION**

The Examiner takes the position that the issuance of the present office action as a final office action is correct because Applicants' amendments necessitated the new grounds of rejection, citing MPEP 706.07(a) as support.

Applicants respectfully disagree with the Examiner and request that the finality of the present office action be reconsidered and withdrawn. Applicants respectfully point the Examiner in MPEP 706.07(a) wherein it states:

"A second or any subsequent action on the merits in any application or patent involved in reexamination proceedings should not be made final if it includes a rejection, on prior art not of record, of any claim amended to include limitations which should reasonably have been expected to be claimed."

Applicants respectfully submit that United States Patent Number 4,975,406 was not of record until the present office action was issued. Applicants have reviewed all IDSs submitted, along with all of the Examiner's search results, and this particular reference does not appear until the most recent search performed on 3-27-2009. Further, Applicants submit that the amendments made to Claim 1 are reasonably expected. The limitation concerning the rare earth metal content was already present in the Claims, and the amount of rare earth metal present in the Claims through the previous amendment is clearly listed as a preferred amount of rare earth metal in paragraph [0008] of the present specification. Thus, it is Applicants' position that the issuance of a final office action in present application is premature per MPEP 706.07(a). Applicants also respectfully point the Examiner to MPEP 706.07, in particular the comments made after the reproduction of 37 C.F.R. 1.113.

**ELECTION/RESTRICTIONS**

The Examiner takes the position that Claims 7-8 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the catalyst of Claims 1-6 can be used for a materially different process (such as controlling vehicle exhaust emissions) than the process of Claims 7-8. The Examiner continues that he takes the position that Applicants have constructively elected by original presentation of the

invention, Claims 7-8 are withdrawn from consideration constructively, citing 37 C.F.R. 1.142(b) and MPEP 821.03 as support for his position.

Applicants respectfully disagree with the examiner. Claims 7 and 8 as amended are not independent or distinct from the invention as originally claimed. Instead, amended Claims 7 and 8 merely recited the invention contained in original Claims 7 and 8 in a form acceptable to the patent office. Original Claims 7 and 8 claimed the use of the catalyst composition in an FCC process. Amended Claims 7 and 8 merely reworded these Claims to state an FCC process utilizing the catalyst composition; thus claiming the same subject matter in a Claim structure acceptable to the patent office.

Applicants also do not agree with the Examiner concerning the use of the catalyst composition in a materially different process. The Examiner makes a blanket statement that the catalyst composition could be used in controlling vehicle emissions. However, he provides no substance or teaching that this catalyst would perform that function or that one having ordinary skill in the art would find a catalyst composition useful for metal trapping useful in a vehicle exhaust environment. It appears that the Examiner is relying on the teaching of *Frestad* in this regard. Applicants respectfully point out that *Frestad* concerns a layered catalyst system that is discussed in greater detail below with regards to the obviousness rejection presented.

Applicants also do not agree with the Examiner's reliance on 37 C.F.R. 1.142(b) to support his position. 37 C.F.R. 1.142 relates to a situation where an Examiner has issued a requirement for restriction in a previous office action. 37 C.F.R. 1.142(b) contemplates that in a response to such a restriction requirement, if the Applicants do not cancel the Claims to the non-elected inventions, these Claims are nevertheless considered withdrawn and cancelled by the election. Applicants respectfully submit that the Examiner has yet to issue a restriction requirement in the present case, and therefore, his reliance on 37 C.F.R. 1.142(b) is incorrect.

Applicants also do not agree with the Examiner's reliance on MPEP 821.03 as support for his unilateral cancellation of amended Claims 7 and 8. Applicants note that MPEP 821.03 is completely silent as to the Examiner's ability to independently cancel or withdraw Claims from an application. Instead MPEP 821.03 states:

"If, after an office action on an application, the applicant presents claims directed to an invention distinct from and independent of the invention previously claimed, the applicant will be required to restrict the claims to the invention previously claimed if the amendment is entered..."

Applicants respectfully submit that, as noted above, amended Claims 7 and 8 do not claim an invention distinct and independent from original Claims 7 and 8. Instead, amended Claims 7 and 8 claim the identical invention but in Claim language acceptable to the USPTO. Further, should the Examiner incorrectly conclude that amended Claims 7 and 8 claim an invention distinct and independent from original Claims 7 and 8, the remedy for such a conclusion is that Applicant is restricted to the invention of original Claims 7 and 8.

Thus, the Examiner is requested to reconsider his statements under the title "Election/Restriction" in the present office action. Applicants also request that amended Claims 7 and 8 be rightfully included in the present application. Or, in the alternative, should the Examiner incorrectly conclude that amended Claims 7 and 8 claim an invention distinct and independent from original Claims 7 and 8, Applicants respectfully request that original Claims 7 and 8 be reinstated.

### **CLAIM REJECTIONS**

#### **Rejection Under 35 U.S.C. 103**

Claims 1-3 have been rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent Number 4,975,406, Frestad, et al. ("*Frestad*").

#### **EXAMINER'S POSITION**

The Examiner takes the position that each and every range of each individual component of the composition taught by *Frestad* overlap with the corresponding weight percentage range of each individual component of instant Claims 1 and 3.

The Examiner also states that with regards to Claim 2, that since there are only 6 alkaline earth metal oxides to choose from, it would have been obvious to select magnesium oxide because of the limited number of choices one has.

#### **APPLICANT'S POSITION**

Applicants respectfully disagree with the Examiner, and Applicants take the position that the present invention is not obvious in light of the teachings of *Frestad*. Applicants respectfully submit that the Examiner's citation of col. 3, lines 56-68 needs to be reconsidered and carefully reviewed. *Frestad* refers to a layered catalyst having a monolithic carrier body having a layer deposited thereon, see col. 1, line 23 through col. 2, line 8, and col. 3, lines 56-68 discusses in great detail the composition of each catalyst layer as (a), (b),

and (c). Thus, each of (a), (b) and (c) relates to a distinct layer on a monolithic carrier, and the weight percents in each layer are based on the coating layer, not on the catalyst as a whole. This is reinforced by the discussion in column 4, lines 20-24, wherein it states that the amount of metal oxide promoter is "calculated on the weight of the catalytical coating"; in col. 4, lines 1-5 wherein it states that the amount of noble metal is based on the weight of the entire coating; and col. 3, lines 55-57 wherein it states that the amounts to be discussed refer to the layers of the catalyst. The Claims also provide clear guidance that the amounts of metals are based on the total weight of the coating layer, not the catalyst. For example, Claim 1 states that the catalyst comprises at least 2 washcoat layers, and Claim 2 states that each washcoat layer contains a certain amount of metals.

Fortunately, *Frestad* also provides direction as to the amount of coating provided on a carrier body so that one may reasonably deduce the amount of metals based on the total catalyst composition. In col. 2, lines 1-6, the inventors of *Frestad* clearly state that a typical catalyst will contain about 20wt.% of such a coating, and this section is important because it concludes the definition of carrier body as used throughout *Frestad*. Thus, since the coatings of *Frestad* only represent 20wt.% of the total catalyst composition, then the metals amounts cited at col. 3, lines 56-68 must be multiplied by this 20% to provide a reasonable estimate of the amount of metals present in the total catalyst. Thus, the amount of  $\text{Al}_2\text{O}_3$  present in the total catalyst is at least 10wt.%, the amount of alkaline earth metal oxides is 0.2 to 2wt.%, and the amount of rare earth metal oxide is 0.2 to 10wt.%, based on the total weight of the composition.

The ranges of metals currently claimed are based on the total weight of the oxidic catalyst composition, as indicated in the Claims. Thus, when one compares the invention presently claimed to the amount of metals present in the invention of *Frestad*, based on the total composition instead of simply the coating, one can clearly see that there is no overlap with regards to the amount of rare earth metal or divalent metal. Thus, Applicants take the position that the present invention is not obvious in light of *Frestad*.

With regards to Claim 2, Applicants first note that Claim 2 is a dependent Claim and includes, by definition, all of the Claims from which it depends, namely novel independent Claim 1. Thus, for the reasons noted above in relation to Claim 1, Claim 2 is also not obvious in light of *Frestad*.

The Examiner is requested to reconsider and withdraw this rejection.

Second Rejection Under 35 U.S.C. 103

Claim 1-3 and 6 has been rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent Number 4,921,824, Chin, et al. ("*Chin*").

**EXAMINER'S POSITION**

The Examiner takes the position that each and every range of each individual component of the composition taught by *Chin* overlap with the corresponding weight percentage range of each individual component of instant Claims 1-3.

The Examiner also states that with regards to Claim 6, that *Chin* discloses that the catalyst particle can include a matrix as well as clay, etc., citing col.4, lines 3-16.

**APPLICANT'S POSITION**

Applicants respectfully disagree with the Examiner, and Applicants take the position that the present invention is not obvious in light of the teachings of *Chin*. Applicants first note that *Chin* clearly states at col. 3, lines 45-46 that "the amount of lanthanum and, optionally, other rare earth oxides in the discrete particles *is not critical*"(emphasis added). Applicants thus respectfully point the Examiner to the Examples of the present invention and also paragraph [0056]. Applicants take the position that these sections of the present application make clear that *Chin's* conclusions are incorrect, and that the amount of rare earth metal oxide has an impact on the performance of the present invention. Applicants thus direct the Examiner's attention to MPEP 2144.05 III.

With regards to Claim 6, Applicants note that Claim 6 includes all of the limitations of Claim 1. Thus, for the reasons noted above, Claim 6 is also not obvious in light of *Chin*.

The Examiner is requested to reconsider and withdraw this rejection.

Third Rejection Under 35 U.S.C. 103

Claims 4 and 5 have been rejected under 35 U.S.C. 103(a) as being unpatentable over *Chin* in view of European Patent Application EP 0554968 ("*Kim*").

**EXAMINER'S POSITION**

The Examiner takes the position that *Chin* in combination with *Kim* teaches an invention similar to that claimed in Claims 5 and 6. In particular, the Examiner states that *Kim* discloses a process for forming a MgO-Lanthanum oxide-aluminum oxide catalyst involving

forming a precipitate from a solution containing dissolved divalent, trivalent, and rare earth metal salts, followed by calcinations of the precipitate, pointing to Figure II of *Kim*. The Examiner thus takes the position that it would have been obvious to produce the composition of *Chin* using the process of *Kim*.

#### **APPLICANT'S POSITION**

Applicants respectfully disagree with the Examiner, and Applicants take the position that the invention of Claims 5 and 6 are not obvious in light of the teachings of *Chin* in combination with *Kim*. Applicants note that the process of *Kim* could perhaps be used to produce the catalyst of *Chin*. However, this does not provide the requisite teaching to produce the presently claimed oxidic catalyst, as is required by the Claims. Among other reasons, the catalyst composition itself is not obvious, thus the amount of components used to produce such a catalyst is also not obvious. Further, with regards to Claim 5, neither *Chin* nor *Kim* describes or teaches the calcination of a physical mixture of a divalent, a trivalent, and a rare earth metal source, as is presently claimed.

The Examiner is requested to reconsider and withdraw this rejection.

#### **Fourth Rejection Under 35 U.S.C. 103**

Claims 1-6 have been rejected under 35 U.S.C. 103(a) as being unpatentable over *Kim* in view of *Chin*.

#### **EXAMINER'S POSITION**

With regards to Claims 1-3, the Examiner takes the position that it would have been obvious to modify the composition of *Kim* such that the lanthanum oxide content of the composition is greater than 25%, preferably greater than 50% as taught by *Chin*. The Examiner continues that these ranges would thus overlap with the present ranges and cites MPEP 2144.05 as support for his prima facie case of obviousness.

With regards to Claims 4, 5, and 6, the Examiner basically repeats his rejections noted above.

#### **APPLICANTS' POSITION**

Applicants respectfully disagree with the Examiner, and Applicants take the position that the present invention is not obvious in light of the teachings of *Kim* in view of *Chin*.

As noted above, the composition of the present invention is inventive in light of the teachings of *Chin*. The teachings of *Kim* also do not provide support to obviate the present invention, as demonstrated by the present examples. Thus, the present invention is inventive in light of the teachings of *Kim* in combination with *Chin*. Applicants respectfully point the Examiner to the Examples of the present invention and also paragraph [0056]. Applicants take the position that these sections of the present application make clear that *Chin's* conclusions are incorrect with regards to the amount of rare earth metal oxide, and *Kim* does not provide further support to sustain the Examiner's rejections.

With regards to Claim 6, Applicants note that Claim 6 includes all of the limitations of Claim 1. Thus, for the reasons noted above, Claim 6 is also not obvious in light of *Kim* in combination with *Chin*.

With regards to Claims 4 and 5, Applicants note that neither *Kim* nor *Chin* provide the requisite teaching to produce the presently claimed oxidic catalyst, as is required by the Claims. Among other reasons, the catalyst composition itself is not obvious, thus the amount of components used to produce such a catalyst is also not obvious. Further, with regards to Claim 5, neither *Chin* nor *Kim* describes or teaches the calcination of a physical mixture of a divalent, a trivalent, and a rare earth metal source, as is presently claimed.

The Examiner is requested to reconsider and withdraw these rejections.

Based on the preceding amendments and remarks, the Examiner is requested to withdraw all objections, reconsider and withdraw all rejections, and pass this application to allowance. The Examiner is encouraged to contact Applicants' attorney should the Examiner wish to discuss this application further.

Respectfully submitted,



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